More than ten years ago, Michigan began discussing the feasibility of integrating criminal justice information. At that time, the solution seemed to require virtually every state and local criminal justice system to be written for compatibility. Cost and logistics prohibited a massive rewrite. As much as agencies wanted to share information, the thought of starting over yielded little, if any, interest in combining information for sharing purposes. Since the first group discussion regarding integrating criminal justice information, much has occurred with new technology.

Today we are finding ways to deploy state-of-the-art technology that was not available ten years ago. This has afforded us the opportunity to forge new partnerships among local and state agencies. A great deal of intelligence information received is held by local and state law enforcement agencies. Much of this information is segregated and not appropriately analyzed or disseminated to allow for terrorism prevention. Many agencies in Michigan lack appropriate technology for timely two-way communication of intelligence information. Michigan's Criminal Justice Information Systems Police Council considers the integration of criminal justice data a top priority.

The venture of Homeland Security demands greater information sharing at all levels of the criminal justice system. Every responder to Homeland Security needs information to be effective. Information is the backbone of every aspect of the public safety process. Homeland security and justice cannot be properly administered without complete and accurate information. In today's public safety processes, many inadequacies exist in the collection, storage and dissemination of information needed to make justice administration decisions, deploy resources, improve operational effectiveness, and most importantly, protect our homeland.

A detailed examination of justice and public safety processes reveals a complex series of iterative steps and organizational interactions that occur from the time a person enters the system until he/she exits the system. Each step or process requires the collection and distribution of increasing amounts of information. Although there is a great deal of information stored electronically in Michigan, very little of it is quickly available across agency boundaries. Integration and sharing of public safety information is confounded by a combination of problems related to both information quality and information sharing.

The goal was to deploy technology in a manner that would create a seamless network of information sharing without centrally "warehousing" massive files. Information sharing partners prefer to

> *Software from Core Technology® Corporation, Lansing, Michigan, is being used to implement the ISERVICES Gateway. Core Technology has an array of products, called TalonSuite, designed for sharing law enforcement information. The solution suite is composed of two components—Talon Clients and Talon-Point. Talon is the client application. Talon Suite is the backend architecture that handles the sharing of information.*

manage their own information while, at the same time, allowing access to others via a seamless network. The Integrated System for Electronic Retrieval of Vital Information on Crime Enforcement and Security (ISERVICES) gateway project is a vital step forward in the effort to integrate criminal justice information systems and expand the sharing of information among all local, state and federal law enforcement agencies. The Gateway leverages the newly implemented Michigan Criminal Justice Information Network (MiCJIN) portal which provides for state-of-the-art security authentication and encryption. The Enterprise Application Integration (EAI) architecture, which is also referred to as the Identity Management and Single Sign-On architecture is the foundation for the MiCJIN portal.

This architecture uses leading edge technology with the best of breed products to securely deliver criminal justice applications to users regardless of where the user is connecting from. The project was initiated to bridge the gap between legacy applications and next generation applications while providing users seamless utilization of the applications from any desktop capable of using a web-browser and an intranet or internet connection. This new delivery model for users provided additional required encryption, and authenticated and authorized access to criminal justice applications that fit the business needs of the end-user.

ISERVICES is a data sharing project funded by the Department of Homeland Security through the Information Technology Evaluation Project (ITEP).

CRIMINAL JUSTICE PROSPECTIVE
From the point of view of the officer (or agent) on the street, it is a dream come true. The ISERVICES gateway project allows for single sign-on to the secure encrypted portal and the one time entry of a name query to access multiple state and local databases.

Currently, the Michigan State Police along with law enforcement partners from the east, central and west sides of the state are sharing information from disparate databases. One data sharing partner is the County Law Enforcement Management Information System (CLEMIS), which is a consortium of 90 police agencies in Oakland, Livingston, Washtenaw, Wayne and Genesee Counties; 70 of whom share information. CLEMIS has an excess of 5500 police officers under its umbrella. Another consortium consists of the police agencies of Kent County, including the Kent County Sheriff's Department and Grand Rapids Police Department, numbering over 750 police officers. The Lansing Police Department is the final partner from the central part of the state with over 200 officers. The Michigan State Police has four operational sites, two posts, and two plain clothes enforcement teams testing the concept. Current data sharing partners and the Department of Homeland Security are conducting an evaluation of ISERVICES to determine if the concept is properly addressing the need for integrated criminal justice information.

By: Tom Evans, Michigan State Police and Dave Hadsall, Core Technology Corporation

INTEGRATED SYSTEM for ELECTRONIC RETRIEVAL of VITAL INFORMATION for CRIME ENFORCEMENT and SECURITY
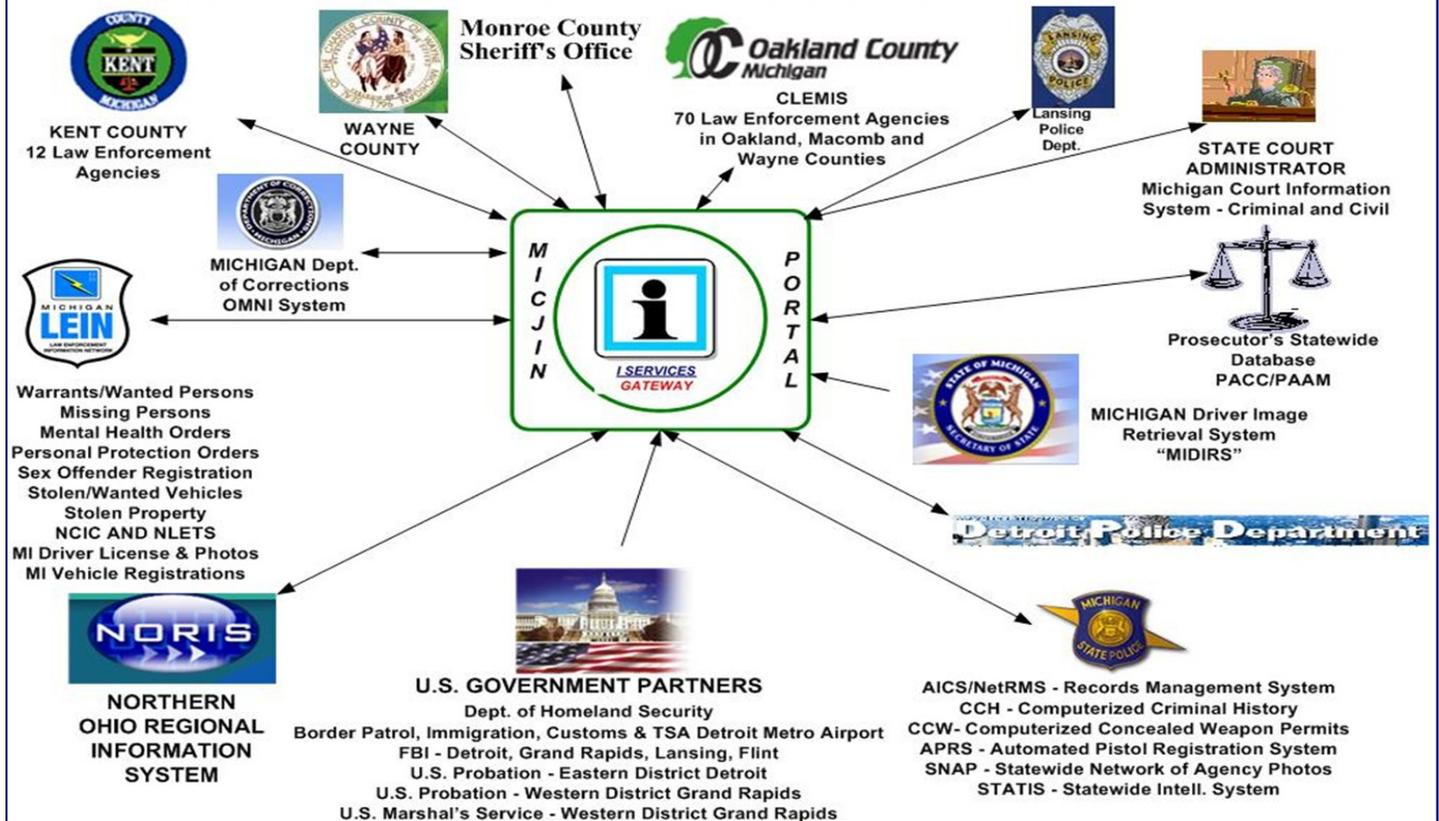
The number of accessible databases that are operational, or soon to be operational, behind the ISERVICES gateway is phenomenal. Partners can access the Law Enforcement Information Network (LEIN), the base statewide network for warrant, missing person, and stolen property entries. Other state databases include the Automated Incident Capture System (AICS), Criminal Histories (CCH), Concealed Weapons Permits (CCW), Automated Pistol Registry System (APRS), Statewide Network of Agency Photographs (SNAP), the Statewide Intelligence Information System (STATIS), the Michigan Driver Image Retrieval System (MIDRIS), the Michigan Department of Corrections database (OMNI) the databases from various levels of State Courts (SCOA), and the state Processing Attorney's offices (PACC/PAAM).

Local databases include records management systems (RMS) and jail management systems (JMS) of the 12 police agencies in the metropolitan Grand Rapids area (Kent County), RMS and JMS of the 70 police agencies in CLEMIS and RMS, JMS, accident database, and pawned items database of the Lansing Police Department.

Several agencies of the Federal Government, including the Border Patrol, Customs and the Transportation Security Administration have agreed to act as evaluation partners in testing this data sharing concept. The U.S. Border Patrol reports a success story as a result of using the ISERVICES gateway. A Border Patrol officer queried an individual at the request of a Customs officer at the Detroit point of entry. The resulting information alerted the Customs officer to investigate the individual further. It was determined that the individual was on the terrorist list.

The power of a single entry query across multiple databases is obvious. Investigations that used to require hundreds of manpower hours can now be accomplished in a single maneuver. The new pawn database, BWI Pawn, used by the Lansing Police is of widespread interest. The city of Lansing has an ordinance which requires pawn shops to submit fingerprints and pawnshop transactions electronically. These are transmitted to the pawn database in real time. Two out-state police agencies have recovered stolen property in the city of Lansing as a result of querying BWI Pawn. Stolen property recovery used to be a

tedious, labor intensive, hit or miss proposition. The new data sharing initiative changes that.

TECHNOLOGY PERSPECTIVE

Software from Core Technology® Corporation, Lansing, Michigan-based software firm is being used to implement the ISERVICES gateway. Core Technology has an array of products, called Talon®, designed for sharing law enforcement information. The solution suite is composed of two components, Talon clients and TalonPoint. Talon is the client application. TalonPoint® is the backend architecture that handles the sharing of information.

TalonPoint allows participating agencies to query each other's law enforcement data in real time. The TalonPoint infrastructure allows public safety agencies to retain their current databases and platforms, as well as talk to each of the participating systems in their native form. It supports not only traditional database systems, but also data stored on legacy systems, such as mainframes and AS/400s. There is no need for agencies to replace their current data system with a

In addition, standard technology, such as TCP/IP and XML is used to facilitate information sharing. This approach allows the agencies to share information with the following additional benefits:

- Promotes cost effectiveness by not requiring changes to the existing data

- Provides flexibility to allow for the evolution of standards and systems

- Practical approach that leverages existing systems and implementation

- Scalable solution that can exchange information with virtually any type of system

- The time required to implement the total solution is months, not years

TALONPOINT ARCHITECTURE

The following describes the features of TalonPoint:

Services Oriented Architecture (SOA)

- Provides access and sharing between any type of existing, dissimilar systems without requiring changes, or a new upgraded system

- Provides a mechanism for querying data in agencies as well as pushing, pulling and publishing data between systems

- Participants can subscribe to information that exists on other systems and be notified if the information appears or changes

- Agency requests and responses are delivered in real time.

- Architecture is scalable and extensible by using a building block hub and spoke approach. Each agency can implement the solution within their own regions' TalonPoint solution. This allows ease of adding new agencies when they are ready without delaying other participants

FLEXIBLE TECHNOLOGIES EMPLOYED

System Connection Technologies

- Database queries for systems where direct database calls are most effective

- Direct APIs, when available

- Query results are formatted into XML, using the Global Justice XML Data Model for transmission back to the requester

- Client and server components are written in Java so they can be installed on a variety of systems

- The TCP/IP protocol is used to exchange data so it can utilize any TCP/IP based private network and any of the popular forms of Internet access to connect to the participating agencies. It can also use wireless technology so public safety workers can receive critical information wherever they are located

- Other technologies, such as SOAP, web services and J2EE are supported and can be used on top of TCP/IP, when appropriate

> *The front-end middle-ware concept provided by Core Technology is very cost effective and requires little time to implement. The concept is easily transferable to other state or regional systems that want to function in a seamless environment.*

SECURITY

- NCIC complaint by securing access and data through 256-bit data encryption and a choice of multiple authentication methods

- Role based security to ensure only authorized personnel can access sensitive law enforcement data

- Provides extensive auditing capabilities to ensure proper usage of the system

TALON CLIENT

- Incorporates a familiar user interface that is currently used by many Michigan agencies to request information from the state. This same interface is used to access agency systems in addition to the state

- The clients, written in Java, can be installed on a variety of hardware devices including desktops, laptops, in-car com-
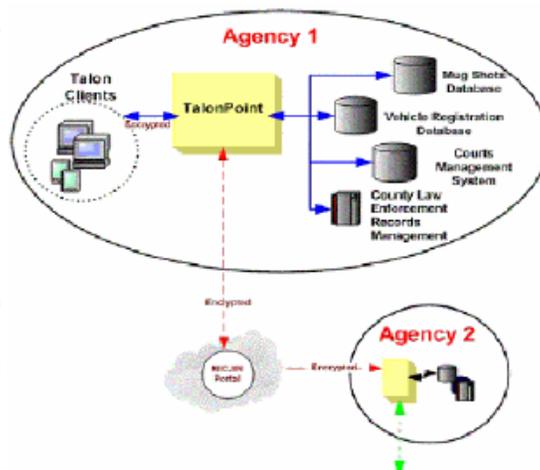

Figure 2
TalonPoint Architecture-Sample Agency

puters and hand-held devices

- The easy to use yet powerful client interface changes pure data into folders and formats results to easily find critical data

- Talon client adds a level of convenience to users by allowing them to access all the participating agencies' data with a single query

The innovative architecture of TalonPoint allows any agency to participate in information sharing with virtually any type of system. The hub and spoke model allows easy expansion of the solution to other agencies and jurisdictions, increasing the scope of information sharing systems. It can be implemented as a full solution, as in the ISERVICES gateway project, or as a plug-in for other information systems.

THE BOTTOM LINE

ISERVICES is an efficient, cost-effective and comprehensive investigative tool for officers and agents at all levels of the criminal justice community. It protects the citizens, the officers and agents who serve them, and the security of our country. It is the cornerstone of criminal justice information sharing. Not only is the concept effective, it precludes the necessity of re-writing local systems in order to share information. The front-end middle-ware concept provided by Core Technology is very cost effective and requires little time to implement. The concept is easily transferable to other state or regional systems that want to function in a seamless environment.

Thomas L. Evans
Senior Executive

Assistant Deputy Director
Michigan State Police

Executive Secretary
CJIS Police Council

Graduated from Michigan State University, Bachelor of Science, 1969, Criminal Justice Administration. Over forty-two years in law enforcement and criminal justice, including over twenty years with the Michigan State Police. While with the state police, Tom has served as Assistant Director for the Criminal Justice Data Center, Office of Central Programs and Communications divisions. He also served the state police as a Director of Information Technology through the Department of Information Technology. Background includes positions as a dispatcher, deputy sheriff, campus security officer, identification technician and probation officer. For nine years he was the Director of Information Systems for the Wisconsin Department of Justice and subsequently was a company Executive Vice President an President specializing in criminal justice information systems including computer aided dispatching, records management, telecommunication networks, 800 MHz radio systems and mobile technology. **http://www.michigan.gov/msp**

David A. Hadsall
President & CEO

Core Technology® Corporation

David Hadsall is a graduate of the University of Michigan and co-founder of Core Technology®. In addition to running the company as President and CEO, he is actively engaged in researching and developing new technology. Dave started his computer career with Burroughs, supporting customers. He then formed a company called Systems West, Inc. that provided custom programming services. While at Systems West, Dave created the first terminal emulator for the Burroughs/Unisys markets. For over twenty years, Dave and Core Technology® Corporation have been creating new technology for legacy systems and the law enforcement community. **http://www.coretechcorp.com**

For more information about Core Technology products and services, please call or e-mail:

1-800-338-2117

sales@coretechcorp.com